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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,798	08/28/2003	Michael J. Ludowise	LUM-02-09-02	2016

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EXAMINER	
CAO, PHAT X	

ART UNIT	PAPER NUMBER
2814	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/652,798	LUDOWISE, MICHAEL J.	
	Examiner	Art Unit	
	Phat X. Cao	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *18-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/28/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-17 in the reply filed on 12/09/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-8 and 11-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Taskar et al (US. 2003/0209714).

Regarding claim 1, Taskar (Fig. 3) discloses a light emitting device comprising: a

Structure comprising: a light emitting region 41 (par. [0040]) disposed between a region 43 of first conductivity type (p) (par. [0041]) and a region 39 of second conductivity type (n) (par. [0040]); and a distributed Bragg reflector 37; a first contact 47 electrically connected to the region 43 of first conductivity type; a second contact 45 electrically connected to the region 39 of second conductivity type; and a metal layer 47 having a reflectivity to light emitted by the light emitting region 41 greater than 75% (par. [0053]); wherein the first contact 47 and the second contact 45 are formed on a same side of the structure.

Regarding claims 2-4, Taskar's Fig. 3 further discloses that the light emitting region 41 is disposed between the distributed Bragg reflector 37 and the metal layer 47, the metal layer 47 is one of the first and second contacts and made of gold or aluminum (par. [0052]).

Regarding claims 5, 8, 16 and 17, Taskar further discloses that the distributed Bragg reflector 37 alternatively can be disposed between the first contact 47 and the region 43 of first conductivity type (not shown in Fig. 3, see par. [0055]), the distributed Bragg reflector 37 has a reflectivity to light emitted by the light emitting region between about 50 to 75% (par. [0053]) or about 85 to 99% (par. [0055]), and the metal layer 47 has a reflectivity to light emitted by the light emitting region greater than 80% (par. [0053]).

Regarding claims 6, 11 and 13, Taskar's Fig. 3 further discloses that a transparent window region 33 (par. [0038]) is attached to a second side of the structure opposite the first side, the distributed Bragg reflector 37 and the metal layer 47 form a

resonant cavity 49, and light generated by the light emitting region is extracted from the resonant cavity 49 through the distributed Bragg reflector (par. [0058]), and the light generated by the light emitting region is extracted from the device through the transparent window region 33 (par. [0061]).

Regarding claim 7, Taskar further discloses that a distance between the metal layer 47 and the distributed Bragg reflector 37 is an integer multiple of lambda/2 (pars. [0042]-[0047]).

Regarding claim 12, Taskar's Fig. 3 further discloses that the distributed Bragg reflector 37 is disposed between the region 39 of second conductivity type and the transparent window region 33.

Regarding claim 15, Taskar further teaches an alternative embodiment (see Fig. 5), which has a host substrate 63, attached to a second side of the structure by the reflective metal layer 75.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taskar et al (US. 2003/0209714) in view of Hatakoshi et al (US. 2003/0209722).

Taskar does not specifically disclose that the first contact comprises a ring or mesh.

However, Hatakoshi (Fig. 4A) teaches a light-emitting device having a first contact 223 and a second contact 224, the first contact 223 comprising a ring and connected to the region of first conductivity type. Accordingly, it would have been obvious to form the first contact of Taskar as a ring or mesh because such ring or mesh would provide the opening or window on the light-emitting surface for emitting the light.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phat X. Cao whose telephone number is (571) 272-1703. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PC
March 4, 2005

PHAT X. CAO
PRIMARY EXAMINER